

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (canceled).
2. (previously presented) A composite according to claim 19, wherein the velocity barrier layer reduces the velocity of an impinging gas stream by at least 50% across the thickness of the velocity barrier layer.
3. (previously presented) A composite according to claim 19, wherein the velocity barrier layer reduces the velocity of an impinging gas stream to less than 1 meter per second across the thickness of the velocity barrier layer.
4. (previously presented) A composite according to claim 19, wherein the substrate is selected from the group consisting of silicon nitride, silicon carbide, silicon aluminum oxynitride, silicon nitride composite, silicon carbide composite, silicon carbon nitride, molybdenum alloy containing silicon, niobium alloy containing silicon, iron alloy containing silicon, nickel alloy containing silicon, cobalt alloy containing silicon, and mixtures thereof.
- 5-7. (canceled).
8. (previously presented) A composite according to claim 19, wherein the velocity barrier layer has a thickness and a thermal

resistance such that the ratio of velocity barrier layer thickness to overall coating thickness is within  $\pm 25\%$  of the ratio of velocity barrier layer thermal resistance to the overall coating thermal resistance.

9. (original) A composite according to claim 8, wherein the velocity barrier layer reduces the velocity of an impinging gas stream to less than 1 meter per second across the thickness of the velocity barrier layer.

10-17. (canceled).

18. (previously presented) A turbine component formed from the composite of claim 19.

19. (currently amended) A composite comprising:

a silicon based substrate;

a velocity barrier layer comprising a ceramic selected from the group consisting of porous hafnia, porous mullite, porous alumina, porous alumina plus mullite where the mullite is present in the range of 50 to 99% by weight, porous yttria, porous yttrium silicate ranging from 1:1 to 1:2 mole ratio of yttria and silica, porous zirconia, ~~porous yttria stabilized zirconia where the yttria is present in the range of 1 to 20% by weight~~, porous niobia, porous niobia plus alumina where the alumina is present in the range of 20 to 80% by weight and mixtures thereof, wherein the velocity barrier layer has a porosity in the range of 10 to 50% by volume; and

an environmental barrier coating (EBC) between the silicon based substrate and the velocity barrier layer, wherein the EBC comprises one or more protective layers selected from the group consisting of silicon, refractory oxides, refractory oxide

silicates, refractory oxide aluminosilicates, rare earth oxides, rare earth silicates, rare earth aluminosilicates, alkaline earth oxides, alkaline earth silicates, alkaline earth aluminosilicates, yttria, yttrium silicate, yttrium aluminosilicate, barium aluminosilicate, strontium aluminosilicate, barium-strontium aluminosilicate, and oxides and silicides of molybdenum, silicon, tantalum, niobium, zirconium, hafnium, aluminum, titanium, and mixtures thereof.